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FINANCING GROWTH AND LOCAL GOVERNMENTS IN JAPAN: WHY DOES THE GOVERNMENT KEEP GROWING?*

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Abstract

The paper casts the public finance of Japan into the process of economic development and identifies why the government (including the central and local governments) has kept growing. It will deal with two issues. The first is to show the role played by the government for accumulating capital and for delivering social insurance. The second is to show why some localities have fiscally been dependent on the central government for a long period and to discuss why both the central and local governments have been caught in this trap. The paper is oriented toward more diagnosis than prescription; emphasis will be placed on supplying as much empirical evidence as possible to clarify the two issues.

Key words: Japan; Central and local governments; Transfer systems; Public investment
JEL classification: H60, H77, O23

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I. *Introduction*

Japan is a unitary country with the central government, forty-seven prefecture (province) -level governments and more than three thousand municipalities (governments of cities and villages). While this administrative framework has essentially been unaltered for a long period, economic environment of the nation has widely been changing. High economic growth, once a hallmark of the country, seems to be long over, and now the government has been busy in pulling the economy out of a muddle it has fallen into after the burst of bubbles in the early 1990s. Population is aging very rapidly, and with it the pension benefits and medical costs of the old have been rising sharply. In localities, some of prefectures and municipalities have persistently been dependent on massive grants and subsidies from the central government, and they have lost their incentives to help themselves out of this dependent situation.

The purpose of this paper is to cast the public finance of Japan into the process of economic development and to identify why the government (including the central and local governments) has kept growing. The paper will deal with two issues. The first is to show the role played by the government for accumulating capital and for delivering social insurance. The second is to show why some localities have fiscally been dependent on the central government and to discuss why both the central and local governments have been caught in this disincentive trap.We will start with looking at the contribution of the government to financing development. Saving side will be treated first, and public savings will be compared with those of the household and non-financial corporations. Investment side will also be looked into, and the capital accumulation process in Japan during the middle of the 1950s and the late 1990s will be studied, shedding special light on the role of the government.

Using the definition of the general government of the System of National Accounts, we will divide it into three "governments": the central, local governments and social-security funds. Observations will be presented as to how the structure of Japanese public finance has changed and where it will be going; how deeply the central government has turned from a surplus to deficit sector and how perpetually it has been distributing its substantial part of revenues to other "governments"; how big an agent local governments have been in public investment, investing now as much as private non-financial corporations' total net investment.

Our discussion of the relation between the central and local governments goes like the following. We first note that prefectures consisting of a bottom-half income group have been granted massive transfers from the central government through various grants and subsidies. This strong dependence of "poor" prefectures on the central government has seen little change over the last forty years. That is, transfer systems have essentially bailed out these prefectures. Grant-receiving prefectures, on the other side, have lost their incentives to help themselves out of this dependent situation.

We will show how serious this fiscal disincentive situation has been, i.e., as long as prefectures stay poor, they will continue to be rescued by the central government. Moreover, instruments employed by the central government seem to be inappropriate for coping with redistributing income among prefectures. Here, we will show public investment in roads and other infrastructure has been extensively used for mitigating income disparity among rich and poor regions. We will claim that better instruments would have been employed for redistributing income than public investment that has so often been a spawning ground of vested interests and corruption.

Summing up, we will conclude that too much emphasis has been put upon bailing out financially vulnerable prefectures without a scope for dynamic transformation of local governments and local jurisdictions. If more fiscal endowments, say more diversified menu of taxes and wider tax bases, had been relegated to prefectures for more fiscal decentralization with a clear commitment of the central government that ex-post bailouts would no longer be granted, local governments would have met their challenges better. This might have resulted in successes and failures of prefectures in strengthening their economies, and those failed would have been pressed drastic restructuring measures. However, it would have invited more efforts from local governments and people, and changed Japanese local landscape more dynamic and efficient.

The construction of the rest of the paper is as follows. The second section will look at a macro-economic aspect of public finance and compare central and local public finances. The third section will be devoted to local public finance and to showing the empirical evidence of the disincentive trap that has developed between the central government and some of dependent localities. The last section will conclude the paper.

II. *Comparing Central and Local Governments in Japan*

1 Macro-economic Aspect of Public Finance of Japan

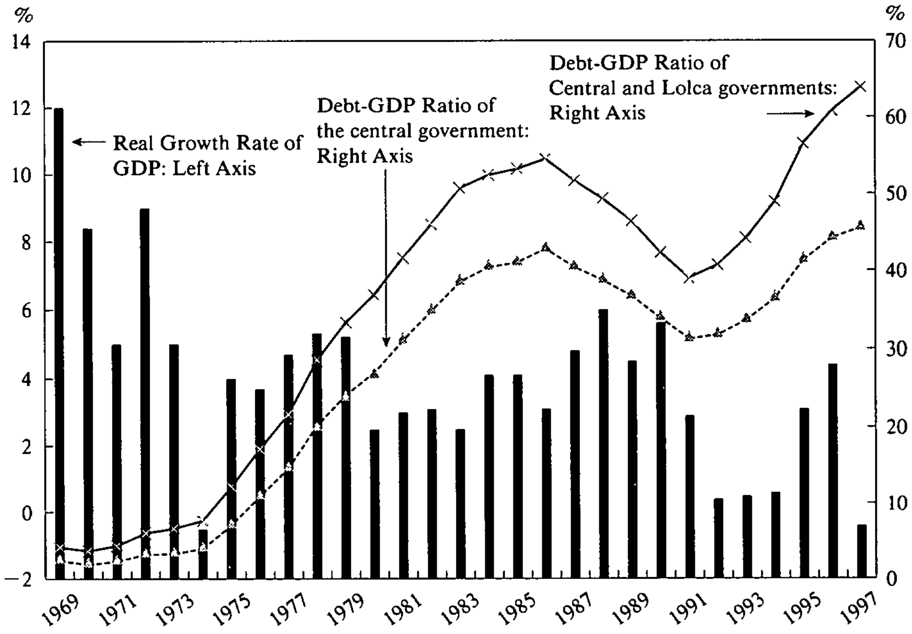
The purpose of this sub-section is to overlook economic development and public finance of Japan. For this, we would like to start by presenting a figure that shows very clearly the transformation of Japanese economy over the last forty years. Figure 1 shows three trajectories: the real GDP growth rate and the debt-GDP ratios of the central government, and the central and local governments combined. The GDP growth rates by fiscal year are shown on the left axis, and the debt-GDP ratios at the end of each calendar year are on the right axis.

The double-digit growth era in Japan has gone in the very early 1970s, and it went through turbulent periods in the rest of the period. The long stagnated situation during the middle of the 1970s and the early 1980s was followed by a steep rise in the economy fuelled by easy money, and the economy got into the "bubbles" in the late 1980s. The real economic growth rates reaching 6% and 5.5% in 1988 and 1990 were rather extraordinary for a matured economy like Japan. With the burst of bubbles, it plunged into a very deep recession, the worst in the post-war period, and it has been struggling its way out of serious economic setback.

The declining growth has consistently put the government on alert. The sharp drop of economy in 1974 after the oil-shock triggered a big government spending, and this was a starting point of accumulating public debt. The central government moved first to boost the economy, and local governments joined the central one. The aforementioned bubble contributed temporarily to increasing tax revenue and helped reducing the debt-GDP ratio, but ironically, the longer-run consequence was the other way round.

The collapse of bubble economy in the early 1990s has resulted not only in bankruptcies of manufacturing firms, but of financial companies, that is, various banking and non-banking financial firms. Now, tens of trillion yen, amounting approximately to hundreds of billion U.S. dollars, have been pumped into restructuring ailing financial institutions, and the source of

FIGURE 1. REAL GROWTH RATE OF GDP AND DEBT-GDP RATIOS OF CENTRAL AND LOCAL GOVERNMENTS



Source: Economic Planning Agency, 1999, *Annual Report on National Accounts.*

these bailouts has mostly been provided by the government.

Local governments have not been set aside of this enormous debt issuance. The government stimulated the economy by increasing public investment. In Japan, local governments are major investors of this kind, and they have issued their bonds for financing their investment. While the central and local governments have been struggling to float the economy, their shrinking revenue continued to force the two governments to resort to more bonds to finance their expenditures.

The result of the massive bond issuance has resulted in a mounting debt-GDP ratio. Central and local governments combined, it surpassed 60% in 1997. Deficit financing continued in succeeding years, and at the turn of the century the debt outstanding of the central and local government will become bigger than the nation's GDP.

2 Central and Local Public Finance

We have seen above that both the central and local governments of Japan have been stimulating the economy by expanding their expenditure and that the government as a whole has been accumulating huge debts. We would here like to turn to an explicit comparison of the budgets and behavior of the central and local governments.

Table 1 compares central and local governments' finances. The Table 1 (A) shows revenue and expenditure of local governments in proportion to those of the central govern-

TABLE 1. COMPARING CENTRAL AND LOCAL GOVERNMENTS' FINANCES

(A) Revenue and Expenditure of Local Governments as Percentage of the Central Government

%

	Revenue before transfer	Revenue after transfer	Current expenditure	Capital expenditure (net)	Total expenditure (net)
1970	51.3	150.1	176.2	431.7	225.1
1975	57.6	292.2	203.3	470.6	248.9
1980	56.6	261.0	152.9	558.1	205.8
1985	59.2	209.6	133.9	561.2	173.7
1990	56.6	169.4	145.4	615.6	197.6
1995	60.5	272.1	168.9	522.4	227.3
1996	63.2	311.3	174.1	546.7	230.8
1997	64.1	307.4	177.9	548.6	229.1

(B) Net Investment of the Central and Local Governments as Percentage of GDP

%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Investment rate, total (2)+(5)+(6)+(7)	Non-financial corporations	Central Government	Local Governments	Government total (3)+(4)	Household	Others
1970	22.0	11.3	0.8	3.4	4.1	6.1	0.4
1975	19.8	7.8	0.9	4.0	4.9	6.8	0.4
1980	18.4	7.9	0.8	4.6	5.5	4.7	0.3
1985	13.8	6.9	0.7	3.4	4.1	2.6	0.2
1990	17.3	9.2	0.7	3.7	4.4	3.2	0.4
1995	12.9	4.8	1.0	4.9	6.0	2.0	0.1
1996	13.2	5.0	0.9	4.6	5.6	2.4	0.3
1997	11.6	5.2	0.8	4.2	5.0	1.1	0.3

Source: Same as Figure 1.

ment. The first column of the table indicates that the revenue of local government before transfer has been about a half of that of the central government and that this ratio is increasing in the 1990s. The decline of the central government's revenue against local governments is due to a difference in their sources of revenue; the central government's revenue sources are more from income-based taxes than those of local governments and these taxes were cut to stimulate the economy in the 1990s. Consequently, the central government's revenue-raising capacity has been weakened relative to local governments.

A very noteworthy fact about the central and local governments in Japan is that massive revenues have been transferred from the central government to local governments. The second column of the table shows that the revenue-after-transfer of local governments is much larger than that of the central government and it has been increasing to reach three time as much as the revenue of the central government. Due to this significant transfer from the central government, the expenditure of local governments, too, is much bigger than that of the central government.

When we further look into current and capital expenditure, we can find that local governments spend far more than the central government on capital investment, i.e., four to even six times as big as the central government's. In fact, when viewed from macro-economic statistics, the investment of local governments has been outstanding. Table 1 (B) shows the net investment of Japan consisting of non-financial corporations, central and local governments, and the household, and the numbers in the table are their respective net investment as percentage of the nation's GDP.

The overall net investment has been declining over the years with a substantial drop in the private sector. However, local governments have continued to invest; it is amazing to see that they have invested almost as much as non-financial corporations after the year 1995. High economic growth of Japan was made possible by strong capital investment in the private sector, but now, especially after the collapse of the bubbles in the early 1990s, local governments have been major contributors to capital investment by constructing various roads, bridges and public buildings.

A problem of this size of capital investment of local governments is whether it has helped to raise productivity by upgrading various infrastructures or it has merely been spent for redistributing income to economically stagnant regions, most of which are off-metropolitan areas. Nakazato (1999) has picked up this issue and studied the relation of investment and economic-growth rates of prefectures. He concluded that no significant positive relation can be observed between local investment and growth. Alesina, Danningger and Rostagno (1999) studied public employment in Italy and claimed that almost a half of wage bills of public employment in the South of Italy can be seen as subsidies. Based on this observation, they concluded that public employment in Italy is a disguised form of income redistribution and it has discouraged the development of markets in the heavily subsidized region.

III. *Financing Local Governments*

1 Regional Income Distribution and Revenue-raising Capacity of Prefectures

The purpose of this section is to examine local public finance at work in Japan and to show how massive transfers have been made to support relatively poor prefectures. Special attention will be paid to the role played by public investment. We start with the issue of convergence of per-capita income at the prefectural level and then touch on the revenue-raising capacity of prefectures.

In our original paper submitted to the symposium, we have treated the period from 1957 and 1997, and divided it into three sub-periods: 1956-73, 1974-86 and 1987-97. We have called the first the high-growth period, for the average economic growth rate during this phase was 9.1%. During the second period, 1974-86, the Japanese economy recorded relatively low, but stable growth averaging 3.4% with exceptions of negative growth years after the first oil shock of 1974. The third period is 1987-97 with 2.9% average growth rate, and it has gone through large fluctuations: the highest 6% growth rate during asset-value inflation and -0.4% after the collapse of the bubbles.

We have calculated the coefficient of variation (CV) of per-capita income at the prefectural level as a measure of regional income disparity. Our result is that the CV declined gradually over the high-growth period and stayed low and unaltered during the second period. During the latest period, there was a slight surge in income inequality along with unexpectedly high economic growth brought by asset-value inflation, but it subsided thereafter. These results coincide basically with a previous study on the regional growth and income distribution in Japan [Barro, R. and X. Sala-I-Martin (1992)].

To examine further the income distribution among prefectures, we have divided prefectures into five groups with the first, the richest per-capita income group and the fifth, the poorest[1]. The fact that can be observed from this quintile division is that the convergence of prefecture-level per-capita income has occurred mostly by the relative decline of the top income group during the high-growth period. After this period, relative income of five groups has not changed much; however, during the late 1980s and the very early 1990s, the relative per-capita income of the poorest group went down. Thus, the distribution of regional per-capita income in Japan may be said to be stable since the middle of the 1970s except for the bubble period when the income of the poorest group declined relative to others.

Now, given this distribution of per-capita income, we have studied revenue-raising capacities of prefectures. For this, we have again grouped all prefectures into five according to their per-capita income and compared the proportions of their tax revenue to income. The results are as follows: First, an upward trend of the tax-to-income ratio was observed for all income groups throughout our study period from the 1950s to the 1990s. This implies that tax increase was necessary to support the expansion of local governments. Second, there was a polarization of the ratio between the bottom two and other relatively better-off groups. That the bottom two groups have continued to be behind over the years in their capacity to raise tax than other groups seems to indicate that they have not strengthened their efforts to meet their expenditure by their own means.

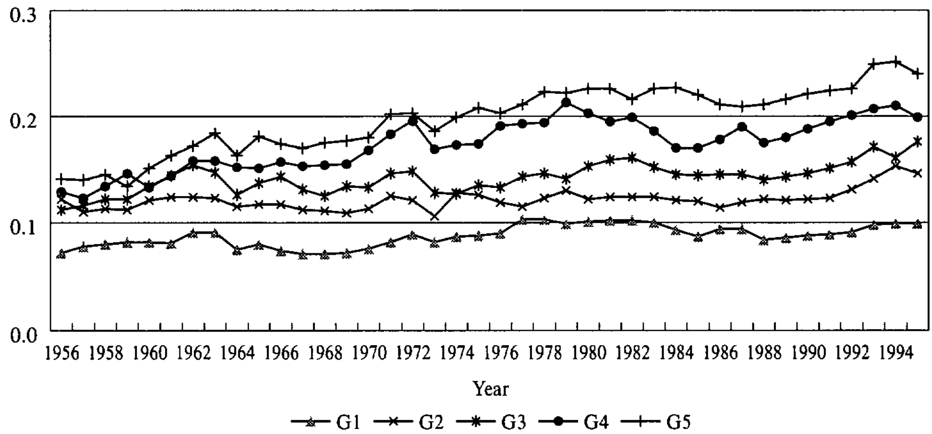
2 A Disincentive Trap in Local Public Finance

We would now like to examine transfers among prefectures and look into the role of public investment for redistributing income. Continuing our preceding analysis, we have first classified prefectures into five groups according to their per-capita income with G1 the highest income group, G2 the second-highest, ...and G5 the lowest. We have, then, calculated the expenditure-to-income ratio for each of the five income groups. The results are shown in Figure 2.

The figure shows that the proportion of expenditure to income has been increasing for all income groups during almost the entire period. We can further find that expenditures of prefectures jumped up at around the year 1970. After double-digit growth in the 1960s, the public aspiration turned from mere economic growth toward better quality of life with cleaner environment and better welfare. Local governments started to offer various public services to

[1] There were forty-six prefectures before 1972, from which we excluded Tokyo Metropolitan prefecture due to its administrative overlapping with its jurisdictional special wards (sub-prefecture level governments). Okinawa was returned to Japan in 1973 and became the forty-seventh prefecture.

FIGURE 2. EXPENDITURE-TO-INCOME RATIOS OF FIVE INCOME GROUPS



Notes: Prefectures are classified into five groups according to their per-capita income. G1 is the highest-income group, G2 the second-highest group...G5 the lowest income group.
Source: Economic Research Institute, *Annual Report on Prefectural Accounts,* various editions.

meet this demand of the public, and the central government supported the activities of local governments. Overall, the role of local governments has been expanding in Japan for delivering various public services and investment.

The second fact that can be found in the figure is that prefectures of lower income has spent more than those of higher income and that the gap between their expenditure-to-income ratios has been increasing, especially from the early 1970s. We have noticed in the preceding sub-section that revenue-raising capacity of lower income prefectures has rather been smaller than those of higher income. Thus, prefectures of lower income have spent more and raised smaller taxes to their income. That is, the lower the income, the higher the fiscal deficits. Consequently, prefectures of lower income have continued to receive much bigger transfers (block grants) from the central government.

Most of local governments in Japan have been receiving transfers from the central government. Among prefectures those that can finance their expenditure for themselves are used to be metropolitan-cities administering ones like Tokyo, Osaka, Kanagawa and Aichi. However, even among these prospering prefectures, it is now only Tokyo that does not receive transfers from the central government with the rest losing the status of non-grant-receiving prefectures. Thus, prefectures are fiscally dependent on grants from the central government.

A startling fact, though, is that the prefectures of lower income have been receiving far more transfers from the central government and that their dependence has not changed much. Almost eighty-five to ninety percent of the expenditure of prefectures of the lowest-income group has persistently been granted from the central government. Situation is very much similar for the second-lowest group. Prefectures of higher-income groups are receiving grants, but their dependence on the central government has increased drastically in the 1990s after the collapse of the bubble-economy which eroded their tax revenue.

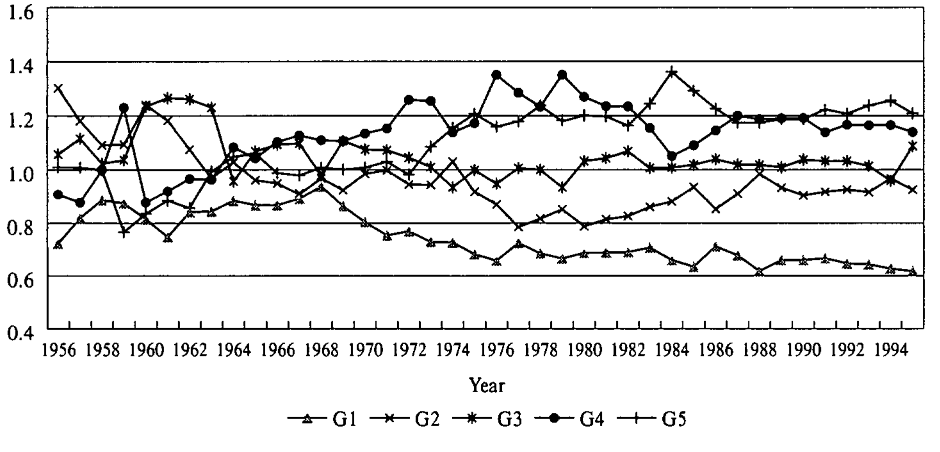
We have pointed out that fiscal dependence of lower-income prefectures has not only been significant, but also persistent; they know they cannot finance their spending and that what cannot be met by their own efforts will be paid by the transfers from the central government. An important point would be that their expectation of the government-bails-them-out has never been betrayed over the years. And they have lost incentives to improve revenue-raising capacities. On the other hand, the central government, especially the political party behind it, has continued to support dependent prefectures for their votes. Thus, both prefectures of lower income and the central government have been stuck in a disincentive trap where the momentum for improving fiscal responsibility has been lost.

We now turn to role of public investment in the budgets of prefectures. A claim that we would like to make here is that behind the aforementioned disincentive trap public investment has been used for income-redistributing purposes among prefectures. We again use the quintile division of prefectures and set unity the overall average of per-capita public investment. The average of public investment of each of the five income groups is measured in a relative magnitude to the overall average; that is, 1.5 for an income group is that their per-capita public investment is fifty percent above the overall average.

Figure 3 shows our results. There are a couple of noteworthy observations. The first is that the variance of per-capita pubic investment across prefectures was much smaller in the 1960s than in years thereafter; public investment had been distributed more equally over prefectures. The second is that after around the year 1970, the variance has been much widened and prefectures of lower income have been appropriated much bigger budgets for investment in per-capita terms. We can notice that there is an enormous difference in public investment between the highest and lowest income groups ant it has been widening.

Thus, public investment of prefectures seems to have been allocated more for a re-distributional purpose than for enhancing nationwide productivity. More study clearly is needed to establish an assertion like this; but our casual impression on local roads, bridges, harbors and various other public facilities supports the view that excess investment has been done in some prefectures belonging to lower-income groups.

FIGURE 3. PER-CAPITA PUBLIC INVESTMENT



Notes: The classification of prefectures is the same as in Figure 2.
Source: The same as Figure 2.

IV. *Conclusions*

We have studied two issues in this paper. First, we have made an extensive use of National Accounts and shown how the government financed growth. Declining growth since the early 1970s has long pushed the government to expansionary fiscal policies except for a short "bubble period" during the late 1980s and the very early 1990s. This has clearly made the government big. At the same time, the central government has made sizable transfers to local governments and various social-security funds. Most of these supports have either been firmly embedded in fiscally vulnerable localities or just will keep increasing along with rapidly expanding social-security payments. Therefore, there is more reason for the government to grow.

Secondly, we have shown local-public finance at work in Japan. Economic growth has brought with it convergence of per-capita income among prefectures. However, this was achieved mainly by the decline of relative income of the highest bracket, i.e. the top quintile in our analysis. Therefore, most of prefectures belonging to bottom layers have been left unchanged. Enormous transfers have been made to these relatively backward prefectures. We have shown, however, that those prefectures that have received sizable transfers from the central government have been content with them and that little effort seems to have been generated from inside of local governments to strengthen their fiscal capacity.

Thus, the paper concludes that financing growth and local governments will lead to more government in Japan. Population keeps aging for several decades to come and some of localities will continue to look for transfers from the central government. Fundamental reform of the current transfer system could alone control the government.

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